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EXAMINER	
WILLS, LAWRENCE E	

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2625	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/717,510	VAN DER HEIJDEN, GERARDUS J.E.L.	
	Examiner	Art Unit	
	LAWRENCE E. WILLS	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 August 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, and 3-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed August 13, 2009 have been fully considered but they are not persuasive. Regarding the applicant's remarks on page 3 which states:

> *The Ryu reference relied upon by the Examiner is directed to a method for calibrating a shutter-type of scamning apparatus by printing by printing a predetemined pattern, scanning the pattern, storing pattern data obtained in this manner, comparing the pattern data with reference data, calculating the amount of image errors and determining the amount of corrections. Accordingly, when a documem is scanned, the scanned image is corrected by the stored amount of corrections. However. the method disclosed in the Ryu reference is only operable for a iimited class of scanneers and the scannerer must be provided with a print head that makes the same movements as the scanned head and the conveyance of a document or a recordable sheet along the preceding direction (please see Fig 6) has to be forward and backward. This is necessary. first, in order that the printed pattern has a number of lines that are really straight which is obtained by moving the paper forward and backward when printing the pattern. Secondiy, after the patmrn has been printed, the paper is fed back so as to be able to scan it and to detemine the image errors. Clearly, the method disclosed in the Ryu reference only works for a limited class of scanners. In addition, the Ryu reference discloses carrying out a correction each time that a document is scanned in. Thus. the Ryu reference fails to teach carrying out once, an all time correction of a parameter and also fails to teach a correction of a mechanical pmameter as well as failing to teach., corrececting a zoom factor.*

However, the broadest reasonable interpretation of the claims is taught by the Ryu reference :

> Ryu'386 teaches a method for calibrating (correcting image errors, abstract) a transport scanner (a shuttle type of a scanner, abstract) apparatus arranged for scanning a two-dimensional original (the recordable paper on which the pattern is printed, column 6, line 9) by moving the original along a fixed optical arrangement of the apparatus (further in a shuttle type of scanner, a scanning head must be moved in a direction normal to a direction in which a document is carried, column 1, lines 23-25) and forming an electronic image (i.e. digital pattern data, column 6, line 27) thereof for subsequent usage in an information handling system (i.e. pattern data is stored though the memory buffer in the RAM, column 6, line 28), said scanning and forming of the electronic image being executed under the control of device parameters (control section controls the scanning module to perform a series of scanning operation, column 4, lines 64-65) that control the processes of making a mapping (the control section compares the pattern data stored in the RAM with the reference data stored in the ROM, column 6, lines 30-31) from an image on the 2-dimensional original (RAM has temporary data, specially the scanned image data, column 5, lines 5-6) to an electronic image in memory (ROM has the correcting table and reference data corresponding to the preset and predetermined pattern to correct errors of the scanned image data, (column 5, lines 2-5), which comprises: scanning a test original (i.e. S5, scan the pattern, Fig. 5A), provided with a test image (Fig. 6A, 6B), and forming an electronic original image thereof (i.e. digital pattern data, column 6, line 27), the test image containing at least

one marking at a predetermined position (i.e. notice the markings on document in Fig. 6A), automatically calibrating the apparatus based on said at least one marking in an electronic bit map image formed therefrom (immediately after scanning the pattern as S5, Fig. 5A, the scanned data is compared to a preset reference data to calculate errors, in S6, Fig. 5A, and further S7, Fig. 5B corrections are made based on errors calculated).

2. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *Clearly, the method disclosed in the Ryu reference only works for a limited class of scanners. In addition, the Ryu reference discloses carrying out a correction each time that a document is scanned in. Thus. the Ryu reference fails to teach carrying out once, an all time correction of a parameter and also fails to teach a correction of a mechanical parameter, page 3*) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

3. In response to applicant's arguments on page 4 and 5 against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re*

Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Horobin'477 teaches utilizing a zoom factor (i.e. magnification in column 3, line 28) in the transport direction (i.e. vertical, column 3, line 32), wherein the test original (i.e. Fig. 2), contains a leading edge (i.e. edge of sheet, column 3, line 56) and comprises two sides of at least one marking in known parallel displacement and parallel with the leading edge (i.e. Fig.2 shows Zone A and C or B and D which are parallel with each other and the leading edge), and a correction value for the zoom factor (i.e. magnification in column 3, line 28) based on the actual parallel displacement (i.e. error in lateral displacement in column 4, lines 32-35 and lines 48-52) of the two sides in the electronic image.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 3, 6, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryu (US Patent No. 6,295,386) in view of Horobin (US Patent 7,106,477)

Regarding claims 1 and 10, Ryu'386 teaches a method for calibrating (correcting image errors, abstract) a transport scanner (a shuttle type of a scanner, abstract) apparatus arranged for scanning a two-dimensional original (the recordable paper on which the pattern is printed, column 6, line 9) by moving the original along a fixed optical arrangement of the apparatus (further in a shuttle type of scanner, a scanning head must be moved in a direction normal to a direction in which a document is carried, column 1, lines 23-25) and forming an electronic image (i.e. digital pattern data, column 6, line 27) thereof for subsequent usage in an information handling system (i.e. pattern data is stored though the memory buffer in the RAM, column 6, line 28), said scanning and forming of the electronic image being executed under the control of device parameters (control section controls the scanning module to perform a series of scanning operation, column 4, lines 64-65) that control the processes of making a mapping (the control section compares the pattern data stored in the RAM with the reference data stored in the ROM, column 6, lines 30-31) from an image on the 2-dimensional original (RAM has temporary data, specially the scanned image data, column 5, lines 5-6) to an electronic image in memory (ROM has the correcting table and reference data corresponding to the preset and predetermined pattern to correct errors of the scanned image data, (column 5, lines 2-5), which comprises: scanning a test original (i.e. S5, scan the pattern, Fig. 5A), provided with a test image (Fig. 6A, 6B), and forming an electronic original image thereof (i.e. digital pattern data, column 6, line 27),

the test image containing at least one marking at a predetermined position (i.e. notice the markings on document in Fig. 6A), automatically calibrating the apparatus based on said at least one marking in an electronic bit map image formed therefrom (immediately after scanning the pattern as S5, Fig. 5A, the scanned data is compared to a preset reference data to calculate errors, in S6, Fig. 5A, and further S7, Fig. 5B corrections are made based on errors calculated).

Ryu'386 fails to teach utilizing a zoom factor in the transport direction, wherein the test original, contains a leading edge and comprises two sides of at least one marking in known parallel displacement and parallel with the leading edge, and the method comprises a correction value for the zoom factor based on the actual parallel displacement of the two sides in the electronic image.

Horobin'477 teaches utilizing a zoom factor (i.e. magnification in column 3, line 28) in the transport direction (i.e. vertical, column 3, line 32), wherein the test original (i.e. Fig. 2), contains a leading edge (i.e. edge of sheet, column 3, line 56) and comprises two sides of at least one marking in known parallel displacement and parallel with the leading edge (i.e. Fig.2 shows Zone A and C or B and D which are parallel with each other and the leading edge), and a correction value for the zoom factor (i.e. magnification in column 3, line 28) based on the actual parallel displacement (i.e. error in lateral displacement in column 4, lines 32-35 and lines 48-52) of the two sides in the electronic image.

Having a shuttle type scanner calibration system of Ryu'386 reference and then given the well-established teaching of Horobin'477 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the calibrating system of Ryu'386 reference to include zoom factor correction as taught by Horobin'477 reference, since the placement and magnification of original images would be significant to a user of the shuttle type scanner and the results of the combination would have been predictable.

Regarding claim 3, Ryu'386 fails to specifically teach wherein at least one marking on the test image has at least one side flush with an edge of the test original; and in the step of scanning the test original, a greater area than the area of the test original is scanned.

Horobin'477 teaches wherein at least one marking on the test image (i.e. as in Fig. 2) has at least one side flush with an edge of the test original (i.e. as in Fig.2 Zones A, B, C, and D are flush with the edge); and in the step of scanning the test original (i.e. feeds into the input scanner in column 3, lines 45-46), a greater area than the area of the test original is scanned (i.e. adjusting the initiation of image output relative to the drawing a sheet from a stack in column 5 line 55).

Having a shuttle type scanner calibration system of Ryu'386 reference and then given the well-established teaching of Horobin'477 reference, it would

have been obvious to one having ordinary skill in the art at the time the invention was made to modify the recording pattern of Ryu'386 reference to include a recording pattern with a side flush with an edge of the test original as taught by Horobin'477 reference the results of the combination would have been predictable and would have increased calibration errors diagnosed by the calibration system.

Regarding claim 6, Ryu'386 fails to specifically teach the zoom factor is perpendicular to the transport direction, wherein the test original comprises two sides of at least one marking parallel to the transport direction, and wherein a correction value for the zoom factor perpendicular to the transport direction is based on a ratio of the distance between the two sides in the electronic image and the actual distance on the test original.

Horobin'477 teaches the zoom factor (i.e. magnification in column 3, line 28) is perpendicular to the transport direction (i.e. horizontal, column 3, line 32), wherein the test original (i.e. Fig. 2) comprises two sides of at least one marking parallel to the transport direction (i.e. Fig.2 shows Zone A and C or B and D which are parallel with each other and the transport direction), and wherein a correction value for the zoom factor perpendicular to the transport direction (i.e. horizontal magnification in column 3, line 28) is based on a ratio of the distance between the two sides in the electronic image and the actual

distance on the test original(i.e. error in lateral displacement in column 4, lines 32-35 and lines 48-52).

Having a shuttle type scanner calibration system of Ryu'386 reference and then given the well-established teaching of Horobin'477 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the calibrating system of Ryu'386 reference to include zoom factor correction as taught by Horobin'477 reference, since the placement and magnification of original images would be significant to a user of the shuttle type scanner and the results of the combination would have been predictable.

Regarding claim 8, Ryu'386, in combination with Horobin'477, teaches wherein the test original is made of a material that has an appropriately conforming and constant size (Fig. 6A Ryu'386), and carries at least one marking for automatically calibrating the apparatus (Fig. 6A Ryu'386).

6. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ryu (US Patent No. 6,295,386) in view of Horobin (US Patent 7,106,477) as applied to claim 3 above, and further in view of Sato (US Patent 5,245, 440).

Regarding claim 4, Ryu'386 in view of Horobin'477 teaches including the step of assessing a correction value (i.e. as in Ryu'386 Fig. 5B, S7) and the test

original contains a marking with one side flush with the leading edge (i.e. as in Horobin'477 Fig. 2), but fails to teach a CCD is used for scanning the two-dimensional original and features a leading edge timing signal for initiating the read out of the CCD, wherein a correction value for the leading edge timing signal is assessed based on the position of the one side in the electronic image in relation to the actually used leading edge timing signal.

Sato'440 teaches a CCD (i.e. CCD in column 3, line 58) is used for scanning the two-dimensional original (i.e. the document to be read in column 2, line 55) and features a leading edge timing signal for initiating the read out of the CCD (i.e. read start time in column 3, line 58), wherein a correction value for the leading edge timing signal (i.e. time of error in column 4, line 30 in addition, T1 and T2 in column 5, line 25) is assessed based on the position of the one side in the electronic image in relation to the actually used leading edge timing signal (i.e. formulae (1) and (2), equivalent to T1 and T2, correspond to the error between the bottom reference line and the actual read line X in column 5, lines 25-35).

Having a system of Ryu'386 in view of Horobin'477 reference and then given the well-established teaching of Sato'440 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Ryu'386 in view of Horobin'477 reference to calibrate a scanners leading/trailing edge timing signal as taught by Sato'440 reference since the results of the combination would have been predictable.

The suggestion for doing so would have been to preserve the placement and magnification of original images increasing the effectiveness of the scanner calibration.

Regarding claim 5, Yun'405 in view of Motamed'312 and in further view of Horobin'477 teaches including the step of assessing a correction value (i.e. image processor performs correcting of the errors for decline of pattern data in Yun'405 column 6, lines 17-22) and a trailing edge for stopping the read out of the CCD (i.e. trail edge in Horobin'477 column 5, line 40), wherein the test original contains a marking with one side flush with the trailing edge (i.e. as in Horobin'477 Fig. 2). However, Yun'405 in view of Motamed'312 and in further view of Horobin'477 fails to teach a CCD is used for scanning the two-dimensional original and a timing signal and wherein a correction value for the timing signal is assessed based on the position of the one side in the electronic image in relation to the actually used timing signal.

Sato'440 teaches a CCD is used for scanning the two-dimensional original (i.e. CCD in column 3, line 58) and a timing signal (i.e. read start time in column 3, line 58) and wherein a correction value for the timing signal (i.e. time of error in column 4, line 30 in addition, T1 and T2 in column 5, line 25) is assessed based on the position of the one side in the electronic image in relation to the actually used timing signal (i.e. formulae (1) and (2), equivalent

to T1 and T2, correspond to the error between the bottom reference line and the actual read line X in column 5, lines 25-35,).

Having a system of Ryu'386 in view of Horobin'477 reference and then given the well-established teaching of Sato'440 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Ryu'386 in view of Horobin'477 reference to calibrate a scanners leading/trailing edge timing signal as taught by Sato'440 reference since the results of the combination would have been predictable. The suggestion for doing so would have been to preserve the placement and magnification of original images increasing the effectiveness of the scanner calibration.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ryu (US Patent No. 6,295,386) in view of Horobin (US Patent 7,106,477) as applied to claim 1 above, and in further view of Lodwick (US Patent 6,226,419).

Regarding claim 7, Ryu'386 in view of Horobin'477 fails to teach the apparatus features a left or right margin position stop, wherein the test original utilizes a marking with one side flush with the left or right edge parallel to the transport movement; and for each line recording is initiated at a first available pixel element of the CCD or recording is stopped at a last available pixel element; and a correction value for the left or right margin signal is assessed based on the difference between the first or last available pixel element and the

one side of the marking, with the one side being flush with the left or the right edge, respectively.

Lodwick'419 teaches the apparatus features a left or right margin position stop (i.e. margin mark in column 7, line 28), wherein the test original (i.e. calibration sheet 1 in Fig.3) utilizes a marking with one side flush with the left or right edge parallel to the transport movement (i.e. left and right margin mark in column 6, lines 10-15); and for each line recording is initiated (i.e. scanning may start in column 7, line 18) at a first available pixel element of the CCD (i.e. right edge of the shaded region in column 7, line 18) or recording is stopped at a last available pixel element (i.e. point G in column 7, line 27)); and a correction value for the left or right margin signal is assessed (i.e. error between the desired distance and the measure distance in column 7, lines 49-55) based on the difference between the first or last available pixel element and the one side of the marking, with the one side being flush with the left or the right edge, respectively.

Having a system of Ryu'386 in view of Horobin'477 reference and then given the well-established teaching of Lodwick'419 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Ryu'386 in view of Horobin'477 reference to calibrate a scanners left and right margin as taught by Lodwick'419 reference since the results of the combination would have been predictable. The suggestion for doing so would have been to preserve the placement and

magnification of original images increasing the effectiveness of the scanner calibration.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ryu (US Patent No. 6,295,386) in view of Horobin (US Patent 7,106,477) as applied to claim 8, and further in view of Fukuda (US Patent 6,624,876).

Regarding claim 9, Ryu'386 in view of Horobin'477 fails to teach markings with a side flush with an edge of the test original are obtained by cutting the corresponding edge of the test original.

Fukuda'876 teaches markings with a side flush with an edge of the test original (i.e. leading end in abstract) are obtained by cutting the corresponding edge of the test original (i.e. cutter cuts the leading end portion off in abstract).

Having a system of Ryu'386 in view of Horobin'477 reference and then given the well-established teaching of Fukuda'876 reference, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Ryu'386 in view of Horobin'477 reference to calibrate a scanner using a cut test image as taught by Fukuda'876 reference since the results of the combination would have been predictable. The suggestion for doing so would have been to increase the effectiveness of the scanner calibration.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAWRENCE E. WILLS whose telephone number is (571)270-3145. The examiner can normally be reached on Monday-Friday 9:30 AM - 6:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on 571-272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/King Y. Poon/
Supervisory Patent Examiner, Art Unit 2625

December 1, 2009
LEW